

ABSTRACT OF THE DISCLOSURE

A time-variable magnetic fields generator for a magnetic resonance apparatus has at least one gradient coil with conductors extending essentially in the region of a subject-receiving hollow opening of the magnetic resonance apparatus, and that is free of conductors in a middle axial region of the hollow opening, a first radio-frequency shield that encloses the conductors disposed on the one side of the middle region, a second radio-frequency shield that encloses the conductors disposed on the other side of the middle region, a radio-frequency antenna element that emits a radio-frequency field, disposed between the first and second radio-frequency shield in the middle region, a third radio-frequency shield proceeding radially, externally around the antenna element, such that the radio-frequency shields delimit a field return space within the generator and that is designed for a return of the radio-frequency field.

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